APPENDIX I.

[Vide answer to starred question No. 308 asked by Sri N. Mahalingam at the meeting of the Legislative Assembly held on 31st July 1952, page 716 supra.]

Proceedings of the second meeting of the Committee of Experts on Lignite Investigation set up under G.O. Ms. No. 4591, dated 18th October 1951.

The following attended the meetings of the Committee at Cuddalore and Neyveli on the 15th and 16th November 1951 respectively :—

1 Mr. Paul R. Eyrich,
2 Sri H. K. Ghose,
3 Sri M. S. Balasundaram,
4 Dr. C. V. Subbaratnam.
5 Sri A. R. Narayana Rao and
6 Sri C. Narayanaswamy.

The Committee reviewed the work so far done which included the detailed report on Investigation of Lignite Deposits of South Arcot by Sri H. K. Ghose.

Mr. Krogczy's (Overseas India, Ltd.) report on the development of lignite deposits of South Arcot district,

Inspection of site, plans, boreholes, borehole data and other records arranged by Sri Ghose, and

Drill cores, bulk samples, briquettes, china clay samples and other items were also inspected.

The Committee after a review of the work so far done entered into a discussion and chalked out the following programme of work :—

(a) To study and investigate all problems connected with the exploitation of the lignite deposits;

(b) The economic utilization of lignite;

(c) The economic utilization of bye-products;

(d) To advise Government on all questions relating to the various aspects of mining and ground water problems and measures to tackle them;

(e) Utilization of lignite for various purposes including power production;

(f) Utilization of clays, sands and water.

(g) Land and irrigation problems; and

(h) All other questions that may be referred to them.

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The following general procedure was outlined :—

(i) To request the experts on the various branches to submit a detailed note on the procedure and programme they would like to adopt regarding their future work.

(ii) To advise the Government by sending an interim report regarding immediate taking up of the pilot scheme which ultimately would enable adequate data to be collected for further development.

Referring to item (ii) of the previous paragraph, i.e., about the pilot scheme, Dr. Paul R. Eyrich has thoroughly examined the scheme with the available data that has been furnished by Mr. H. K. Ghose and by personal observations and deductions feels that no time should be lost in launching the pilot scheme operation and feels that it will be a perfectly feasible proposition. The other experts of the Committee in consultation with the Power Engineer and the Irrigation Engineer accept the basic principles.

It is the considered view of the Committee that work on pilot scheme and investigation of ground water problem, study of economics and utilization of the products should go side by side.

To enable the Government to have an approximate idea of the cost involved, a detailed scheme has been drawn up by Sri Ghose with necessary drawings, blue prints and estimates. These are appended* along with the report. The approximate cost of the scheme is expected to be around 65 lakhs. The merits of the pilot scheme are discussed below :—

To assess and evaluate the problems that would arise in raising the lignite and to give data for future work, a portion of the lignite area that has been delienated in the enclosed* plan has been taken up for this purpose. This has been chosen due to the following reasons :—

(a) The area has sufficiently been proved by trial borings to give the advantageous ratio of lignite to over-burden of 1 : 3 to begin with;

(b) It is proposed to mark out an area of about 500 feet by 500 feet in near proximity of the existing pit No. 3. This is estimated to yield about 20,000 tons of lignite.

The Committee realizes that it may be difficult to get all the equipments in India. The work can start with all machinery, materials and equipment that are available in the country or that could be obtained immediately.

Side by side with the pilot mining project a pilot **plant** for processing the lignite should be established.—

(a) To briquette and carbonize the lignite and *vice versa*;

(b) To extract Montan Wax from lignite;

(c) To establish an organization to study and experiment the economics and marketing and utilization of this to various industries;

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* Not printed.

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(*d*) Setting up of a Thermal Power Station in the neighbourhood of the mining site for supplying power to the mines and also to serve as demonstration and experimental unit to develop the lignite.

The Committee after consideration of the data and after personal inspection support the above pilot scheme unanimously.

PROCEEDINGS OF THE LIGNITE HIGH POWER COMMITTEE MEETING.

Date : 16th January 1952.

Summary of discussions and conclusions reached.

1. Members of the High Power Committee with their Secretary met at Chepauk in the Library Hall of the Office of the Chief Engineer, Public Works Department, to consider the report of the Expert Committee and other matters mentioned in the agenda enclosed.*

2. Members of the Expert Committee were also present. Hon'ble the Minister for Industries, Hon'ble the Minister for Revenue, Secretary to Government, Development Department, and the Chief Construction Engineer (Electricity Department) were also present by invitation.

3. The Expert Committee and other members present gave their views on the scheme of experimental open pit quarrying, and on the other general features connected with mining and use of lignite.

4. After the preliminary discussions were over, the members of the Expert Committee withdrew and the High Power Committee considered the several items on the agenda and discussed them one by one. Hon'ble the Ministers, and the Secretary, Development Department, were, however, also requested to be present for this.

5. The following decisions were taken :—

(1) A scheme for the experimental open pit quarrying be recommended to Government for the following reasons :—

(*a*) South India was extremely short of coal which was only available in small and inadequate quantities even for existing needs due to transport difficulties over long distances a problem for which no immediate solution was possible unless the line of the East Coast was doubled which is a costly and long term project. The cost of such coal as was so transported was almost prohibitive. Due to these factors, there was no future for industries in South India, unless the lignite in South Arcot was developed. This lignite was a high-grade product unlike some of the inferior varieties of coal received from coal fields. Large industrial developments would follow once lignite was mined and marketed.

(*b*) Investigation had reached a stage when all possible data obtainable from bore holes and shafts had been obtained and further data of a nature useful for large scale mining could only be obtained by open pit excavations on a field scale. This experimental work had to be done at some time or other with all the

* Not printed.

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attendant risks. The problems arising out of the excavation and mining should be dealt with as they rose if they cannot be foreseen and all scientific and laboratory resources applied towards solving difficult and unusual problems. It was realized that the water and soil slope stability factors were unpredictable, and might prove possibly more difficult than assumed or encountered anywhere else in the world, but that these risks had to be taken in a work which was experimental. It was for this reason that the scheme was also characterized as experimental.

The High Power Committee considered that the responsibility for the decision should be taken fully by Government in view of the possible loss that the scheme would involve in the event of the experiment proving a failure due to insuperable difficulties.

(2) The scheme should be worked out as far as possible in stages so as to minimize losses, if any, and to plan that would not affect the general plan for full scale development. The work might be done on contract through people who have necessary experience and large amount of equipment available with them already. Government should, however, provide pumping, grouting and other equipment to supplement the contractor's equipment as necessary.

(3) A Control Board should be established, and this Board should control the several features of the experimental open pit excavation including acquisition of machinery needed for the scheme, and should watch the progress of the work, and make modifications to the scheme as work progresses and more data come to light.

(4) The cost of the scheme of Rs. 65 lakhs was tentative and not based on detailed estimates; it would be liable to a possible reduction if the work was done on contract, the contractor bringing his own machinery and to an increase if work was all done departmentally with departmental machinery. At this stage, it was undesirable to take credit for the cost of China clay expected to be recovered in the excavation. The whole scheme should be treated as debitable to experiment and research. A figure will be worked out and reported separately for purposes of financial sanction.

(5) It was not necessary to call in Mr. Beck or any other expert like Dr. Terzaghi or other German Engineers till the excavation had proceeded to a definite stage when some of them could be called in if necessary.

(6) Consideration of the question of transfer of the old Power Plant from Basin Bridge to the site might be deferred; in the meanwhile Diesel standby sets to the extent of pumping needs may be obtained as necessary. A new power line should be built by Electricity Department at their cost to increase the amount of power available at Neyveli.

(7) The grant of concessions to private enterprises worked partly with Government capital, such as those applied for by Messrs. Seshasayee and Parry & Co., might be considered after the policy of the Government of India in such matters was known.